

REMARKS

Claims 40-44, 46 and 48-59 were pending in the application. Claims 40-44, 46, and 48-59 stand rejected. Claims 49, 53, and 57 were cancelled. Claims 48, 50, 52, 54, 56, and 58 were amended. Claims 40-44, 46, 48, 50-52, 54-56, and 58-59 remain in the application.

Claims 42, 44, 46, 48, 52 and 56 stand rejected under 35 U.S.C. 102(e) as being anticipated by Behlok (US Patent 6,469,805 B1). Claims 40-41, 43, 49, 51, 53, 55, 57 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Behlok (US Patent 6,469,805 B1) in view of Hayashi (US Patent 5,790,282). Claims 50, 54 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Behlok (US Patent 6,469,805 131) in view of Hayashi (US Patent 5,790,282) and Miller (US Patent 5,731,823).

The office action states in relation to Claim 48:

"Regarding claim 48: Behlok discloses a method comprising: rasterizing image data of a print job to provide rasterized image data (column 5, lines 23-28 of Behlok); storing said rasterized image data in a job image buffer (column 5, lines 17-28 of Behlok - job image buffer inherent in IPS since RIPped data must be stored on IPS at least during RIPping process); outputting said rasterized image data from said job image buffer to provide output data (figure 2(104) and column 6, lines 4-6 of Behlok); changing said output data in accordance with an operator's adjustments (column 6, lines 12-17 of Behlok); halftoning said changed output data to provide halftone rendered data (column 7, lines 38-40 of Behlok); and printing said print job from said halftone rendered data (column 7, lines 40-44 of Behlok), wherein said changing is during said printing, thereby resulting in a corresponding contemporaneous change in appearance of said printed print job (column 7, lines 1-22 of Behlok - adjustments applied to post-RIP contone image data without any need for re-RIPping, and thus occurs during the printing of the print job)."

In relation to Claim 49 the office action states:

"Regarding claims 49, 53 and 57: Behlok does not disclose expressly performing first and second halftone processes on said output data to produce first and second halftoned data, respectively, and blending said first and second halftoned data.

"Hayashi discloses performing a first halftone process on image data to produce first halftoned data (figure 2(46) and column 4, lines 63-67 of Hayashi) and a second halftone process on image data to produce second halftoned data (figure 2(47) and column 4, line 67 to column 5, line 3 of Hayashi), and blending said first and second halftoned data (figure 2(48) and column 5, lines 3-6 of Hayashi). The image data is saturation adjusted by the color correction circuit (figure 2(43) and column 5, lines 18-20 of Hayashi). Said image data is then sent through two halftone processing devices. Said devices are the image quality correction circuit (figure 2(46) and column 4, lines 63-67 of Hayashi) and the gradation adjustment circuit (figure 2(47) and column 4, line 67 to column 5, line 3 of Hayashi). Since the CMYK halftone data is processed by passing said CMYK halftone data successively through said image quality correction circuit and said gradation adjustment circuit, said CMYK halftone data is effectively blended since factors from both operations have adjusted said CMYK halftone data before being sent to the output processor (figure 2(48) and column 5, lines 3-6 of Hayashi).

"Behlok and Hayashi are combinable because they are from the same field of endeavor, namely digital image data processing, correction and alteration in color image data printing devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the two halftone processes and the blending process taught by Hayashi to the image data with the image processor taught by Behlok. The motivation for doing so would have been that both halftone operations improve the overall quality of the resultant image (column 4, lines 65-67 and column 5, lines 1-3 of Hayashi). Therefore, it would have been obvious to combine Hayashi with Behlok to obtain the invention as specified in claims 49, 53 and 57."

Claim 48 states:

48. An image processing method implemented in a printing system, the method comprising the steps of:
 - rasterizing image data of a print job to provide rasterized image data;
 - storing said rasterized image data in a job image buffer;

outputting said rasterized image data from said job image buffer to provide output data;
accepting input of operator's adjustments of said output data following said outputting;
changing said output data in accordance with said operator's adjustments;
halftoning said changed output data to provide halftone rendered data; and
printing said print job from said halftone rendered data;
wherein said halftoning further comprises performing at least first and second halftone processes in parallel on said output data to produce at least first and second halftoned data, respectively, and blending together said halftoned data in respective proportions determined from said changed output data.

Claim 48 is supported by the application as filed, notably at page 10, lines 7-9; Figures 1-3; page 6, lines 11-32; page 11, lines 5-15.

Claim 48 requires that halftoning of changed output data includes performing of at least first and second halftone processes in parallel. The cited references do not teach performing halftone processes in parallel. As the office action notes in relation to cancelled Claim 49:

"Behlok does not disclose expressly performing first and second halftone processes on said output data to produce first and second halftoned data, respectively, and blending said first and second halftoned data." (page 5)

The office cites Hayashi in this regard and state, in relation to Hayashi:

"Said image data is then sent through two halftone processing devices. Said devices are the image quality correction circuit (figure 2(46) and column 4, lines 63-67 of Hayashi) and the gradation adjustment circuit (figure 2(47) and column 4, line 67 to column 5, line 3 of Hayashi). Since the CMYK halftone data is processed by passing said CMYK halftone data successively through said image quality correction circuit and said gradation adjustment circuit ..." (page 5; emphasis added; also see Hayashi, Figure 2, items 46 and 47)

Claim 48 further requires that the halftoned data produced by the parallel halftone processing is blended in respective proportions determined from

changed output data. The office action notes on page 5 that Behlok does not disclose blending of halftoned data. (See above quote.) In this regard, the office action states as to Hayashi:

"Since the CMYK halftone data is processed by passing said CMYK halftone data successively through said image quality correction circuit and said gradation adjustment circuit, said CMYK halftone data is effectively blended since factors from both operations have adjusted said CMYK halftone data before being sent to the output processor (figure 2(48) and column 5, lines 3-6 of Hayashi)." (page 5; emphasis added)

This is unlike Claim 48, which requires blending of the at least first and second halftoned data in respective proportions determined from the changed output data. Claim 48 further requires that proportions for the blending are determined from changed output data that was changed in accordance with operator's adjustments, which were accepted as input following outputting of the output data from a job image buffer. This is unlike Hayashi and Behlok does not address blending.

Claims 40 and 50-51 are allowable as depending from Claim 48.

Claim 52 and 56 are supported and allowable on the same grounds as Claim 48.

Claims 41-42, 46, and 54-55 are allowable as depending from Claim 52.

Claims 43-44 and 58-59 are allowable as depending from Claim 56.

It is believed that these changes now make the claims clear and definite and, if there are any problems with these changes, Applicants' attorney would appreciate a telephone call.

In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the claimed invention. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Robert Luke Walker", written over a horizontal line.

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